

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

**CEASE AND DESIST ORDER NO. 6-98-15
WDID NO. 6B368020011**

**REQUIRING THE VANDERBILT GOLD CORPORATION AND
THE NATIONAL PARK SERVICE TO CEASE AND DESIST
FROM DISCHARGING WASTE IN VIOLATION OF WASTE
DISCHARGE REQUIREMENTS CONTAINED IN BOARD
ORDERS NO. 6-89-170, 6-89-170A1, AND 6-89-170A2**

San Bernardino County

The California Regional Water Quality Control Board, Lahontan Region (Regional Board) finds:

1. Dischargers

The Vanderbilt Gold Corporation (Vanderbilt) formerly operated the inactive Morning Star Mine (Facility). Mining waste was formerly discharged by Vanderbilt at the Facility, which is located on public land administered by the National Park Service (Park Service). For the purposes of the Regional Board Order (Order), Vanderbilt and the Park Service are referred to as “Dischargers”.

As the administrator of the land, the Park Service is a responsible party for the discharge of waste and any condition or threatened condition of ground water pollution or nuisance resulting from the discharge. Naming the Park Service as a Discharger in this Order is consistent with past determinations by Regional Boards and the State Water Resources Control Board in naming landowners and administrators of public lands as Dischargers. If Vanderbilt fails to meet the requirements of this Order or future potential enforcement Orders, the Regional Board will look to the Park Service to meet and/or complete the requirements of this Order and/or potential future enforcement orders. Hereinafter, the term “Dischargers” will be used to signify the scheme of primary responsibility for Vanderbilt and secondary responsibility for the Park Service.

2. Facility

The Facility is located approximately eight (8) miles south of Mountain Pass and Interstate 15 within Section 28, T15N, R14E, SBB&M as shown on Attachment “A”, which is made a part of this Order.

The Facility includes two lined heap leach pads where gold ore has been leached with cyanide solution, and a lined cyanide pregnant solution pond. The following findings of Board Order No. 6-89-170, as amended, describe the construction of these waste management units:

9. *“...The existing pad one...is double lined with a 40 mil thick polyvinyl chloride (PVC) liner with a geotextile material to form a leachate collection and recovery system (LCRS). The pregnant solution pond is approximately one acre in size and has the capacity to hold approximately two million gallons. The discharger has double lined the pregnant solution pond with a 40 mil thick PVC liner and a 36 mil thick Hypalon liner.”*

10. *“New pad No. 2 will be constructed in cells. Cell No. 1 is currently complete. A seepage detection system is constructed underneath to form a vadose zone monitoring system. The subgrade was compacted to a permeability of 1×10^{-6} cm/sec. No pregnant sump is required in the new cell arrangements. Pregnant solution is pumped directly to the mill. Double 40 mil high density polyethylene (HDPE) layers are installed with a fabric geotextile LCRS. The new pad cells will not require a pregnant or barren solution pond.”*

3. Waste Discharge Requirements

Waste Discharge Requirements (WDRs) for the Facility were previously established pursuant to Board Order No. 6-84-105, which were adopted on October 12, 1984. Board Order No. 6-89-170 was adopted on August 10, 1989, and revised the WDRs for the Facility. Board Order 6-89-170A1 was adopted on August 11, 1994, and amended the WDRs for the Facility. Board Order No. 6-89-170A2 was adopted on November 6, 1997 and also amended the WDRs for the Facility. The Discharge Specifications and Provisions contained in the WDRs, as amended, include the following:

BOARD ORDER NO. 6-89-170 (as amended by Board Orders No. 6-89-170A1 and 6-89-170A2)

I. Discharge Specifications

4. The project shall be provided with vadose zone and ground water monitoring systems as required in Title 27 (formerly Chapter 15).
5. The residual cyanide in the tailings or any leach pad or solution pond shall be detoxified as soon as practicable but in no case later than 30 days after completion of the leaching process. The leaching process is considered “completed” if application of solution or water to ore has been discontinued for a period of 120 days.
11. Surface flow or visible discharge of any leaching solution or neutralization water from the authorized disposal sites to adjacent land areas or surface waters is prohibited.
13. The vertical distance between the water surface elevation and the lowest point of a pond dike or invert of an overflow structure shall not be less than 2.0 feet.

II. Provisions

9. The preliminary closure and post closure maintenance plan...shall be updated if there is a substantial change in operations, and a report shall be submitted annually indicating conformance with existing operations. A final plan shall be submitted at least 180 days prior to beginning any partial or final closure activities or at least 120 days prior to discontinuing the use of the site for waste treatment, storage, or disposal, whichever is greater...
10. ...The discharger shall provide assurances that monies are available upon abandonment of the facility in an amount established by the Board to be sufficient to ensure the closure and subsequent maintenance of the project site in a manner that will not pose a threat to the environment.
18. The Discharger shall provide containment of the residual constituents remaining in heap leach pad No. 1 and the pregnant solution pond, the details of which shall be submitted in the final closure and post closure maintenance plan.
21. The Discharger shall provide, at a minimum, provisions for the following as a part of the final closure and post closure for heap leach pad No. 1 and the pregnant solution pond:

- a. continued water quality monitoring for surface water, vadoze zone, and ground water;
- b. maintenance of proper grading and drainage features for heap pad No. 1;
- c. maintenance of sufficient amounts of financial assurance for monitoring, closure, and post-closure maintenance activities based on the approved detailed cost estimates;

4. Violations

Vanderbilt ceased cyanide leach operations at the Facility in 1994. Vanderbilt's activities at the Facility between 1994 and 1995 were primarily dedicated to detoxification of Pad Two. Pad Two has not been fully detoxified as of the date of the Regional Board hearing. Aside from performing monitoring activities, Vanderbilt has not been active at the Facility since 1995. The following is a summary of current violations of WDRs by Vanderbilt:

a. Ground Water Monitoring

Discharge Specification four (4) requires Vanderbilt to install a vadose zone and ground water monitoring system at the Facility. Previous information submitted by Vanderbilt, including soil boring data, appeared to indicate that ground water was not present beneath the Facility. As such, ground water monitoring was not required. However, during a recent inspection of the Facility, Board staff noted a ground water production well that draws water from directly beneath the Facility. As such, ground water monitoring is an appropriate requirement for the Facility. This Order requires the Dischargers to develop a ground water monitoring program for the Facility.

b. Detoxification of Pad Two

Discharge Specification five (5) requires Vanderbilt to detoxify any leach pad of cyanide within 30 days of "completing" the leaching process. Detoxification is defined in terms of numerical limits for cyanide contained in the Discharge Specifications. "Completing" the leaching process is described as within 120 days of discontinuing the application of cyanide solution. Pad Two is not detoxified of cyanide in accordance with the numerical limitations. As discussed above, Vanderbilt has not circulated fluids in Pad Two for at least two years. Thus, efforts are not proceeding toward detoxification of Pad Two in accordance with the numerical Discharge Specifications.

c. Maintenance of Existing Structures

Discharge Specifications 11 and 13 relate to maintaining the existing structures at the Facility to ensure no overflow of cyanide solution from the waste disposal facilities. Considering that there is no maintenance equipment at the Facility, and that fluids continue to accumulate in the pregnant pond for Pad One and the underdrain system for Pad Two without recirculation, there is a threatened violation of these two Discharge Specifications. Board staff requested the submittal of an operations plan from Vanderbilt in a letter dated February 14, 1996 to ensure compliance with these two Discharge Specifications. Vanderbilt has not submitted the requested plan.

d. Final Closure Plan Submittal

Provision nine (9) requires Vanderbilt to submit a Final Closure Plan within 120 days of discontinuing use of the Facility for waste treatment, storage, or disposal. Vanderbilt has not operated the Facility for at least two years, including recirculation of fluids in Pad Two. Thus, Vanderbilt is required to submit a Final Closure Plan or reinstate operations at the Facility. No Final Closure Plan for the Facility has been received as of the date of this Regional Board hearing.

e. Financial Assurance

Provisions 10 and 21(c) relate to financial assurance for the Facility. The Regional Board is in possession of a performance bond in the amount of thirty-thousand dollars (\$30,000) submitted by Vanderbilt in 1984 for closure and post-closure activities at the Facility. Although these Provisions require Vanderbilt to maintain sufficient financial assurance for closure and post-closure maintenance, Vanderbilt has not updated this financial assurance since 1984 despite significant changes at the Facility. Based on the known cost of closure and post-closure activities at other mining facilities, the \$30,000 is not "sufficient" for performing these activities. In accordance with Section 22510(f) of Title 27, this Order requires the Dischargers to recalculate and submit the necessary financial assurance for closure, post-closure maintenance, and the reasonably foreseeable release scenario.

f. Grading and Reseeding of Pad One

Provision 21(b) requires Vanderbilt to maintain proper grading and drainage features for Pad One in accordance with the approved closure plan. The approved closure plan proposed to grade Pad One, and then reseed Pad One with native vegetation. As of the date of this Regional Board hearing, grading and reseeding activities have not taken place. Furthermore, no equipment is available at the Facility to ensure proper drainage for Pad One or Pad Two. Board staff requested the submittal of a plan to grade and reseed Pad One in letters to Vanderbilt dated February 14, 1996 and April 23, 1997. Vanderbilt has not submitted the requested plan. Copies of letters from Board staff to Vanderbilt and response letters from Vanderbilt are included with this Order in Attachment B.

5. Detoxification of Pad One

In 1994, Pad One was reportedly fresh water rinsed of cyanide in accordance with Discharge Specification contained in Board Order No. 6-89-170. Board Order No. 6-89-170A1 amended the WDRs to reclassify the waste in Pad One from a Group B mine waste to a Group C mine waste. The amended WDRs require Vanderbilt to continue monitoring of liquids draining from Pad One. Monitoring data collected by Vanderbilt in 1996 and 1997 from the pregnant pond which receives drainage from Pad One indicate that the concentrations of cyanide have increased above the numerical detoxification limits described in the Discharge Specifications of Board Order No. 6-89-170. As such, this Cease and Desist Order requires the Dischargers to reevaluate the detoxification of Pad One.

6. Section 13267 of the California Water Code

On December 1, 1997 the Regional Board Executive Officer sent a letter to Vanderbilt requiring the submittal of the technical reports which are detailed in requirements I.A. through I.F. of this Order. Pursuant to Section 13267 of the California Water Code (CWC), the letter required Vanderbilt to submit the complete and adequate technical reports to the Regional Board by March 1, 1998. As of the date of the adoption of this Order, the Discharger has not submitted the complete and adequate technical reports. Pursuant to Section 13268 of the California Water Code (CWC), Vanderbilt may be liable for administrative civil liability (ACL) in an amount not to exceed one-thousand dollars (\$1,000) for each day that the complete and adequate technical reports are not submitted. This Order does not supersede the authority of the Regional Board Executive Officer to issue ACL against Vanderbilt for violations of Section 13267 of the CWC.

7. Lahontan Basin Plan

The Regional Board adopted a Water Quality Control Plan for the Lahontan Basin (Basin Plan) which became effective on March 31, 1995. This Order implements the Basin Plan.

8. California Environmental Quality Act

This action is an enforcement action by a regulatory agency and, as such, is exempt from the provisions of the California Environmental Quality Act (CEQA, Public Resources Code, Section 21000 et seq.) in accordance with Title 14, California Code of Regulations, Section 15321.

9. Public Hearing

On November 7, 1997 after due notice to the Dischargers and other affected parties the

discharge or threatened discharge and violations of requirements. The Regional Board opted to again continue the public hearing to its regularly scheduled meeting of March 5, 1998. On March 5, 1998 the Regional Board conducted a public hearing in Lancaster, California at which time the Dischargers were given the opportunity to appear and/or submit evidence concerning the discharge or threatened discharge and violations of requirements.

IT IS HEREBY ORDERED THAT, in accordance with Section 13301 of the California Water Code:

- I. No later than **March 30, 1998** Vanderbilt shall submit a work plan to the Regional Board that proposes the manner and methods whereby Vanderbilt will come into compliance with WDRs for the Morning Star Mine. The work plan shall be prepared by a California Registered Civil Engineer or Geologist, or a California Certified Engineering Geologist, and shall include provisions for the following:
 - A. a plan to install a ground water monitoring system for the Facility, including a time schedule for implementation of the work plan;
 - B. an operations and maintenance plan for Pad Two and Pad One to ensure compliance with Discharge Specifications and provisions related to overflow of cyanide solutions;
 - C. a statement as to whether Vanderbilt intends to operate or close the Facility. If the Facility is to be closed, Vanderbilt shall include a time schedule to submit a final closure plan for the Facility. If Vanderbilt intends to operate the Facility, the submittal shall include a detailed time schedule for resuming operations;
 - D. a calculation of the amount of financial assurances necessary for closure, post closure maintenance, and the reasonably foreseeable release at the Facility. This calculation shall include a time schedule for submittal of the entire amount of financial assurance. If Vanderbilt intends to close the Facility, the financial assurances for closure will be returned to Vanderbilt once the closure activities are completed;
 - E. a work plan for grading and reseedling of Pad One, including a time schedule for implementation of the work plan; and,
 - F. a work plan to reevaluate the supposed detoxification of Pad One, including a time schedule for implementation of the work plan.
- II. The National Park Service shall submit the complete and detailed work plan in Requirement I. of this Order only if Vanderbilt Gold Corporation fails to do so. The Park Service shall receive written notification from the Regional Board Executive Officer prior to any of these requirements becoming effective, and this Order will be amended as appropriate to incorporate revised dates for compliance.
- III. If, in the judgment of the Executive Officer, the Dischargers fail to comply with the provisions of this Order, the Executive Officer is authorized to issue a complaint for administrative civil liability under the provisions of Section 13268 or Section 13350 of the California Water Code. Additionally, the Executive Officer is also authorized, pursuant to Section 13331 of the California Water Code, to request the State Attorney General to petition the Superior Court for

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the issuance of a permanent injunction or other legal remedy to ensure the Dischargers comply with the requirements of this Order.

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on March 5, 1998.

HAROLD J. SINGER
EXECUTIVE OFFICER

Attachments A: Facility Location Map
 B: Copies of Letters related to this Matter